HANYAO ZHANG

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EDUCATION

Columbia University
Ph.D. candidate in economics *degree expected May 2026*
Research fields: Behavioral economics, Experimental Economics

Peking University
B.A. in Economics with distinction *June 2020*

REFERENCES

Mark Dean (chair)
Professor of Economics
Columbia University
mark.dean@columbia.edu

Alessandra Casella
Professor of Economics and Political Science
Columbia University
ac186@columbia.edu

Ryan Oprea
Professor of Economics
University of California, Berkeley
roprea@gmail.com

Michael Woodford
John Bates Clark Professor of Political Economy
Columbia University
michael.woodford@columbia.edu

JOB MARKET PAPER

"Calculations Behind Lottery Valuations"

I introduce a novel experimental design tracking subjects' calculations when valuing lotteries. The calculations predominantly fall into three groups: expected values, linear functions of monetary outcomes, or those unmatched to lottery primitives. Calculations exhibit remarkable within-subject stability alongside substantial between-subject heterogeneity. Calculations strongly predict valuations: subjects performing expected values-related calculations exhibit near risk-neutrality, while others' valuations on average display extreme unresponsiveness to probability changes. An analysis by calculation group reveals distinct theoretical mechanisms driving behaviors: adoption of expected-value calculations is explained by reductions in implementation costs from the provided calculator, while attribute substitution (Kahneman and Frederick, 2002) explains the linear functions of monetary outcomes.

WORKING PAPER

"Response Noise and Risk Attitudes" (*draft available upon request*)
We develop a novel two-step procedure to correct for the mistakes in experimental subjects' responses to lottery valuation tasks. In the first step, we estimate the structure of mistakes when subjects value the deterministic mirrors of the lotteries (Oprea, 2024) – a deterministic payment that is disaggregated to resemble lotteries – by estimating a mixture model that incorporates two types of mistakes frequently identified in the data. In the second step, we utilize the mistake structure when valuing the deterministic mirrors to correct for the lottery valuations. The corrected lottery valuations are closer to risk neutrality than the raw valuations. When the corrected lottery valuations deviate from risk neutrality, they are predominantly risk averse. Finally, we apply the same two-step procedure to other data sets and yield similar results.

IN PROGRESS

"Computation Complexity, Elicitation Methods, and Lottery Valuations," with Mark Dean *(draft coming soon)*

"Reference-Dependent Motivated Beliefs," with Zhi Hao Lim

PUBLICATIONS

Positive and Negative Sorting in Team Contest, with Qiang Fu, Zenan Wu, and Yangfan Zhou, *Journal of Industrial Economics*, 2024

SEMINAR & CONFERENCE PRESENTATIONS

2025 (including scheduled): SWEET (UPenn), BRIC XI (ITAM, poster), Caltech CTESS Summer Workshop, SDM III (SWUFE), UChicago Brown Bag, ESA North American Meeting, BEEMA9

TEACHING EXPERIENCE

- **Undergraduate**: Behavioral Economics, Econometrics, Microeconomics, Financial Economics
- **Graduate**: Microeconomics

AWARDS & FELLOWSHIPS

- Dissertation Fellowship, Columbia University 2025-2026
- PER Field & Experimental Grant, Columbia University 2025
- PER Summer Research Fellowship, Columbia University 2024, 2025
- CELSS Research Grant, Columbia University 2023, 2024
- Dean's Fellowship, Columbia University 2020-2025
- Excellent Graduate of Peking University, Peking University 2020
- Excellent College Graduate of Beijing, Beijing Municipal Education Commission 2020

PERSONAL

Born August 15th, 1997

Citizenship: Chinese

Languages: Chinese (native), English (fluent)